National Transportation Safety Board

Safety Alert: "Pilots: Manage Risks to Ensure Safety"

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Pilot Risk Management

Michael Huhn, IIC

Accident Synopsis

- Mooney M-20 (non-turbocharged, single engine)
- Attempting to return home
- IFR flight plan, winter weather, icing, mountainous terrain
- 4 POB (father and 3 sons, all fatal)

Pilot

- About 940 total flight hours
- Instrument rated
  - About 23 hours actual instrument
  - Experience in Minnesota
- IFR current per FARs - checkout:
  - 6 hours in accident airplane
  - In the week prior to accident

Sequence of Events

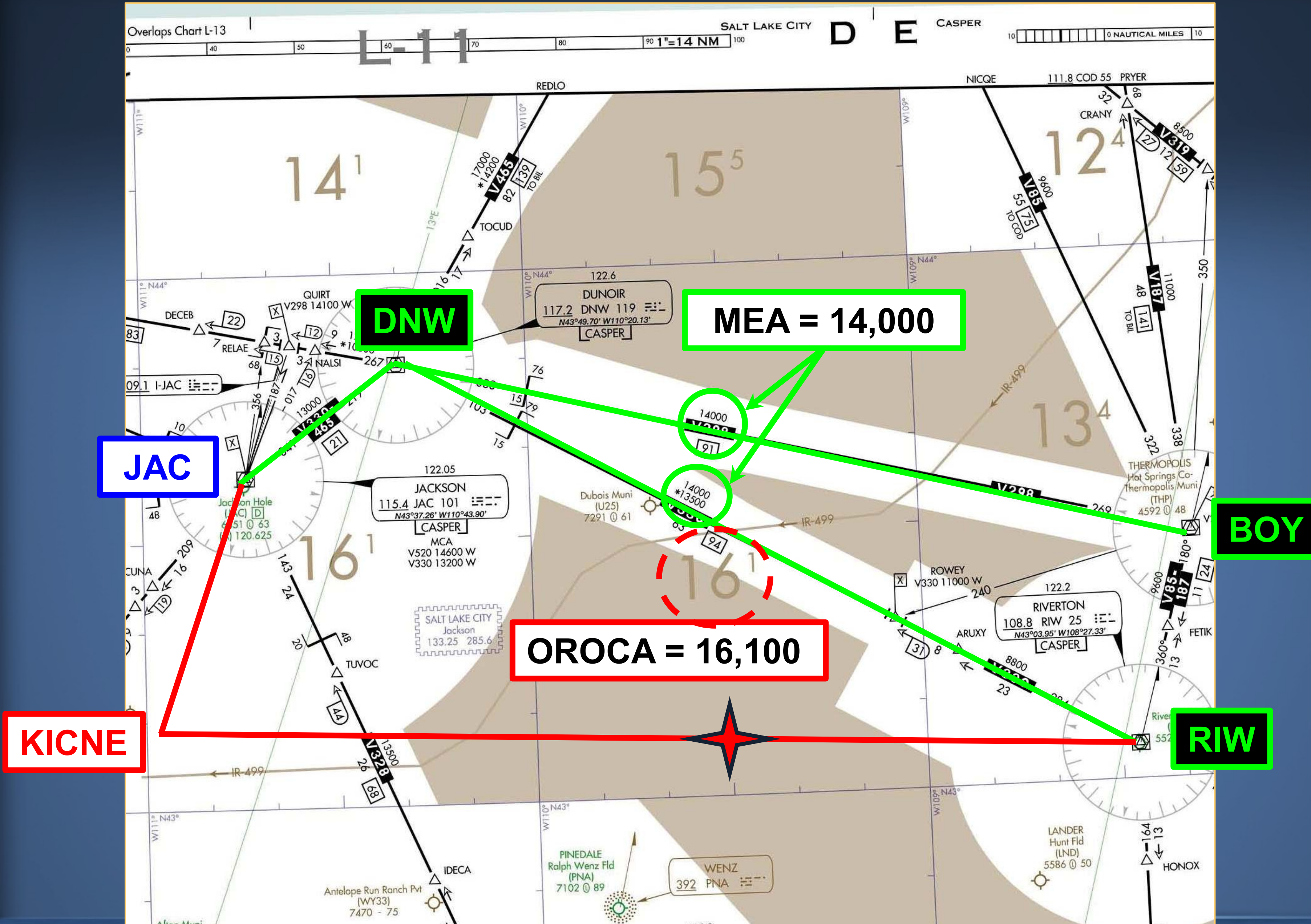
- Sunday (day before accident) cancelled flight due to weather
- Purchased commercial airline tickets for Monday morning
  - Airline flight cancelled (mechanical)
- Then decided to conduct flight

Sequence of Events

- Multiple weather briefings and flight routes/plans (dynamic weather situation)
- Accepted invalid IFR route
- Accepted altitude near airplane performance limit

Sequence of Events

- Difficulty reaching assigned altitude (14,500 feet versus 16,000 feet)
- Icing encountered
- Uncontrolled descent, ground impact


Overlaps Chart L-13
L-11
SALT LAKE CITY
D
E
CASPER
1"=14 NM
NAUTICAL MILES
REDLO
NICQE
PRYER
CRANY
TOCUD
DECEB
QUIRT
RELAE
NALSI
DUNOIR
117.2 DNW 119
CASPER
DNW
MEA = 14,000
JAC
JACKSON
115.4 JAC 101
CASPER
MCA
V520 14600 W
V330 13200 W
Dubois Muni
(U25)
BOY
THERMOPOLIS
ROWEY
V330 11000 W
RIVERTON
108.8 RIW 25
CASPER
ARUXY
FETIK
OROCA = 16,100
TUVOC
KICNE
RIW
IR-499
SALT LAKE CITY
Jackson
133.25 285.6
IDECA
Antelope Run Ranch Pvt
(WY33)
PINEDALE
Ralph Wenz Fld
(PNA)
WENZ
392 PNA
LANDER
Hunt Fld
(LND)
HONOX
Afton Muni

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Missed Opportunities

- Adhere to risk management strategy
- Prevent external pressures from adversely influencing conduct
  - Time pressure ➪ Decision to fly

Missed Opportunities

- Postpone or cancel flight
- Question ATC assignments
  - Flight route
  - Flight altitude
- Turn back or divert
- Request ATC assistance

ASI Perspectives

- “Legal” may not equate to “safe”
- Accurately assess skill level and equipment capability
- Align options and actions with skills and equipment

ASI Perspectives

- Too many repeat, avoidable accidents
- Decision-making: “What were they thinking?”
- Reduce accidents by risk management

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Pilot Risk Management

Craig Hatch, IIC

Accident Flight

- Cessna 310, night IMC
- IFR flight plan to home airport (open, flat terrain)
- Returning home from work trip

Pilot

- Commercial certificate, single- and multi-engine airplanes
- 4,300 flight hours
- Toxicology: 10 medications (4 of which were disqualifying)
- History of severe migraines not reported to FAA
- Class 2 medical

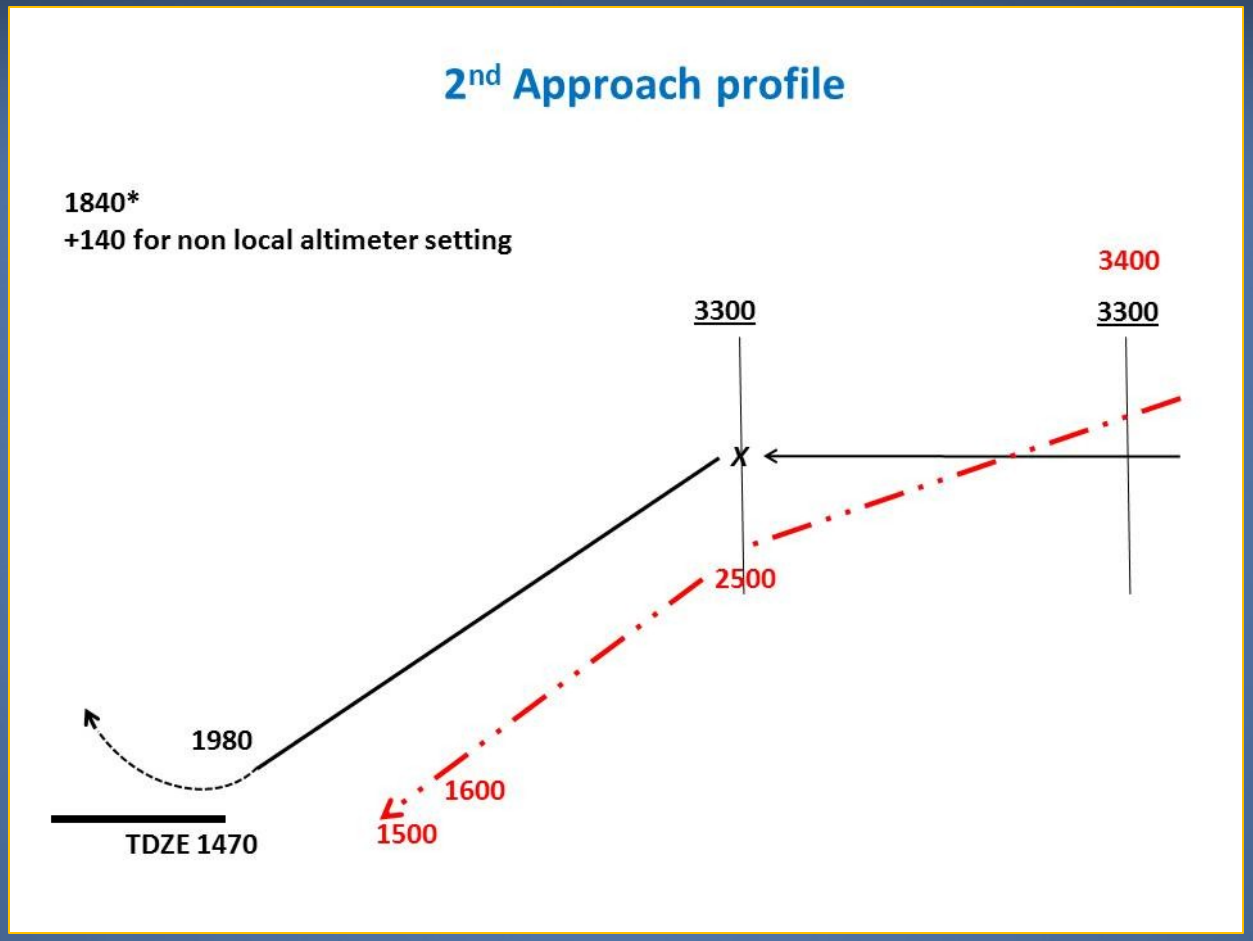
Weather

- Received weather briefings from FSS, concerned with fog
- Reporting station at destination airfield was out of service (closest was 45 miles away)

Airport approach

- First instrument approach unsuccessful
- Radar data showed descent to 1,700 feet
- Pilot told ATC he would try a second approach

Accident Flight



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Missed Opportunities

- Resist external pressures to complete flight
- Adhere to weather information with regard to minimums
- Report medical conditions, assess potential for impairment

ASI Perspectives

- Acronym "IM SAFE" for pilots
  - **I**llness (any illnesses)
  - **M**edication (prescription or over-the-counter)
  - **S**tress (job, health, finances, family)
  - **A**lcohol (consumption within the last 8 hours and 24 hours)
  - **F**atigue (not well-rested)
  - **E**motion (emotionally upset)

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Spatial Disorientation: VFR into IMC

Tim Sorensen, IIC

Accident Flight

- Cirrus SR-20
- Part 91, no flight plan
- Pilot and 3 passengers were killed
- Daylight, VMC into IMC
- Deteriorating weather, intended destination airport was IFR
- Pilot concerned about getting trapped by weather

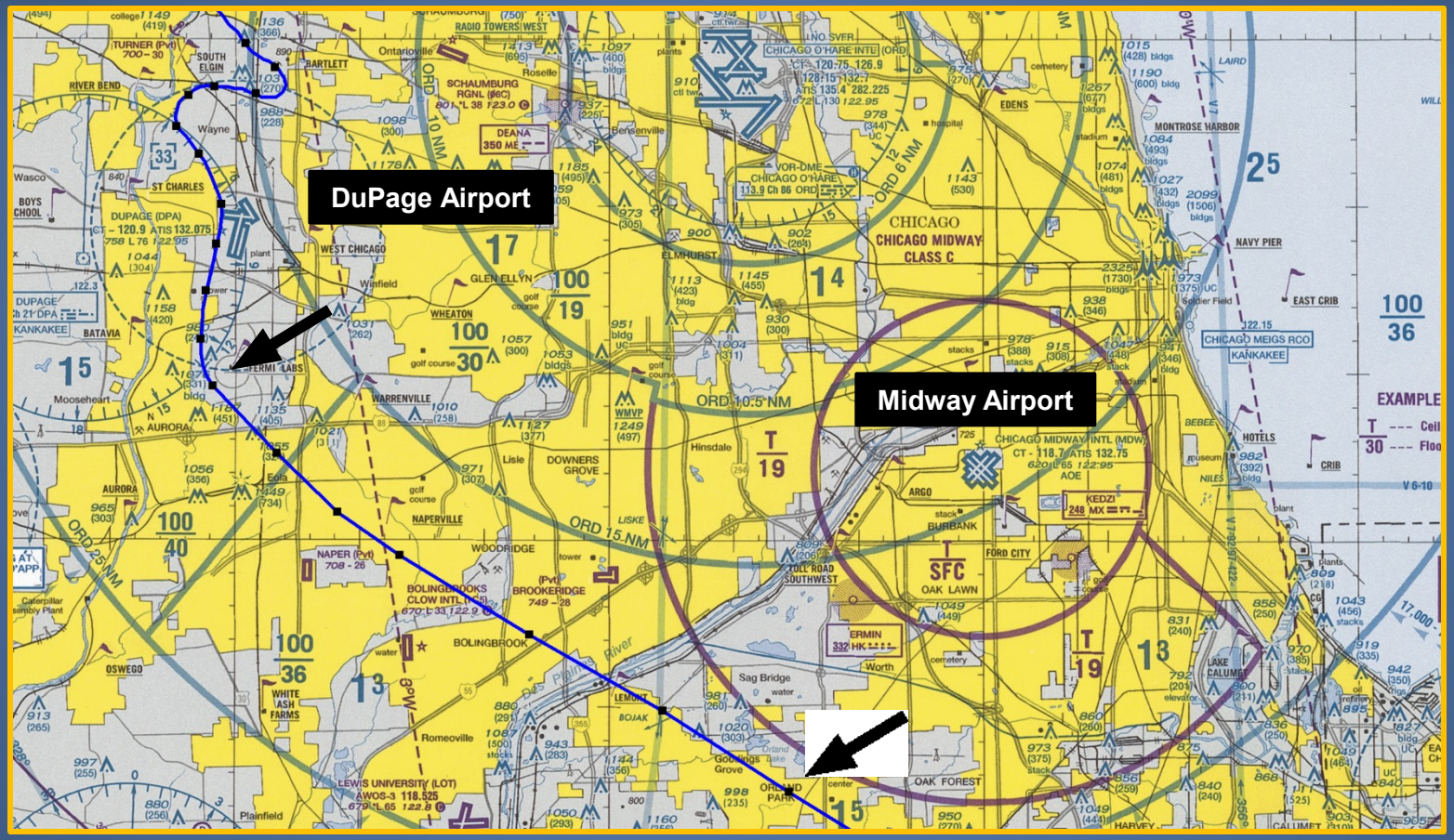
Pilot

- Private pilot, no instrument rating
- 207 total flight hours
- 114 hours in accident airplane
- Pilot reportedly receiving instrument training
- Discrepancies with logbook endorsements

Weather

- No record of a weather briefing
- Departure airport and initial portion of flight conducted under VFR
- Destination airport under IFR
  - Overcast clouds at 900 feet agl
  - Visibility 3 miles in light rain/mist
- Airports east and south remained under VFR

Accident Flight



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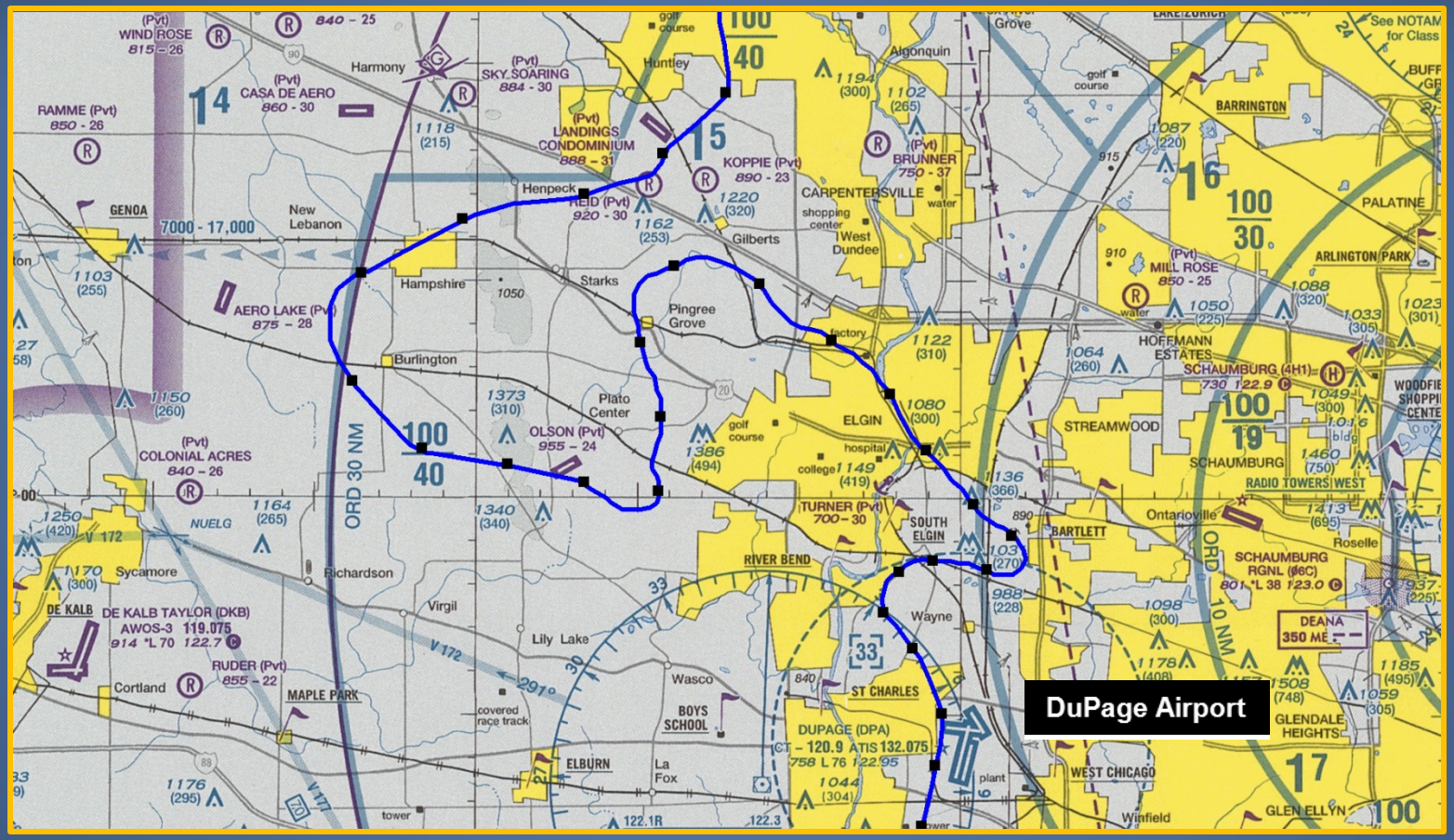
Accident Flight



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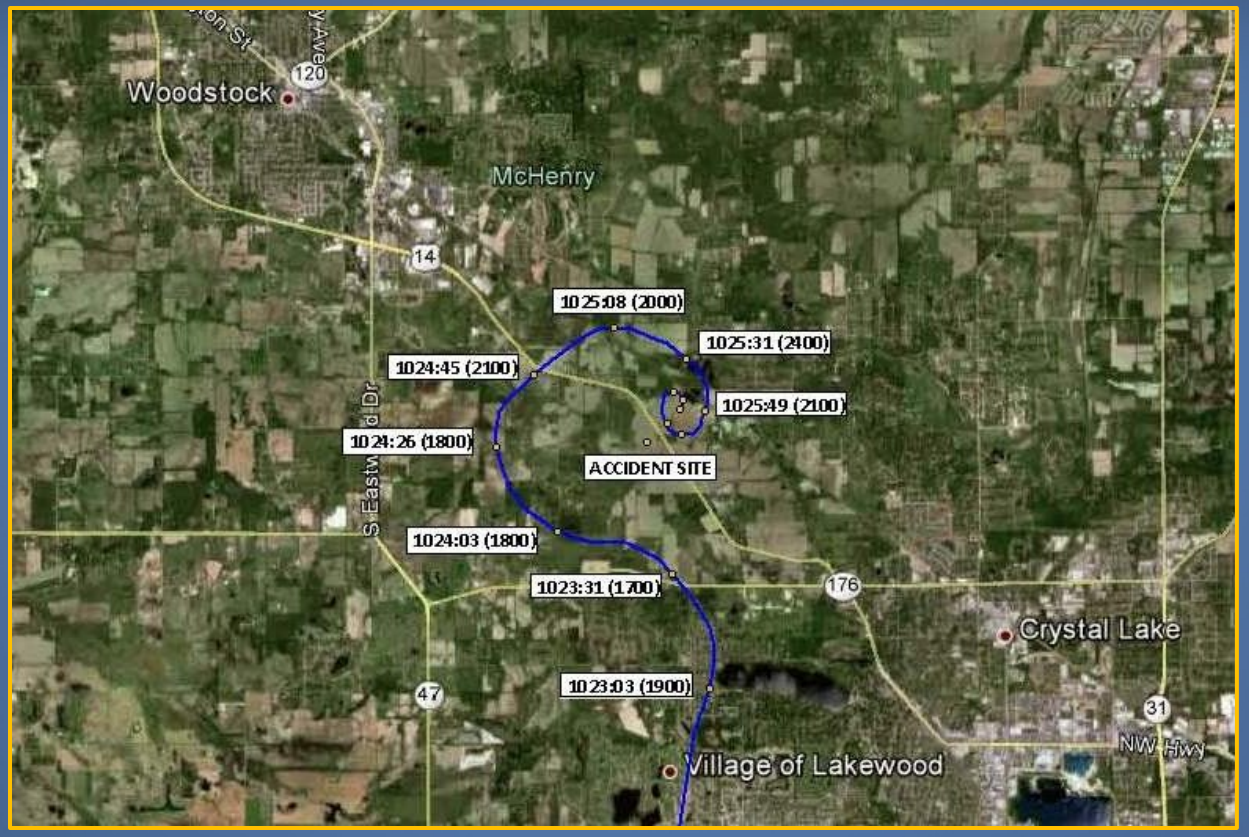
Accident Flight



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Accident Site

Accident Site

Missed Opportunities

- Obtain an official weather briefing
- Resist pressures to complete flight as planned
- Deviate to alternate airport
- Be familiar with regulations

ASI Perspective

Marginal weather conditions require detailed preflight planning, including:

- Obtain an official weather briefing
- Identify flight itinerary alternatives
- Identify alternate personal plans
- Primary concern is safety of flight

Summary

Safety Alert – “Pilots: Manage Risks to Ensure Safety”

- Accident summaries
- Links to educational resources
- “What can pilots do?”

What can pilots do?

- Understand that effective risk management takes practice
- Systematically identify hazards, assess degree of risk, and determine best course of action
- Eliminate fatigue contributors

What can pilots do?

- Be honest with yourself and FAA about medical fitness for flight
- Develop good decision-making
  - Identify hazardous attitudes
  - Apply behavior modification
  - Recognize cope with stress

What can pilots do?

- Be honest about skill level and proficiency
- Resist external pressures
- Plan ahead with alternatives, brief passengers about alternatives

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